UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,000	03/26/2004	Alfred V. Alasia	62770.000099	8488

27682 7590 09/22/2004

J. MICHAEL MARTINEZ DE ANDINO ESQ.
HUNTON & WILLIAMS
RIVERFRONT PLAZA, EAST TOWER
951 EAST BYRD ST.
RICHMOND, VA 23219-4074

EXAMINER	
DO, ANH HONG	

ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/810,000	ALASIA ET AL.	
	Examiner	Art Unit	
	ANH H DO	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-21 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-3,5 and 7-21 is/are rejected.

7)☒ Claim(s) 4 and 6 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 7/21/2004.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3, 5, and 7-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liang (U.S. Patent No. 6,373,965) in view of Wu et al. ("Watermarking for Image Authentication).

Regarding claim 1, Liang disclose a method for authenticating objects comprising:

- providing at least one article 25 (corresponding to the claimed object)

having a print region with printed material (fluorescent) contained thereon comprising a layer of fluorescent indicia (corresponding to the claimed non-visible indicia), wherein the layer of fluorescent indicia comprises a substance that emits at least one wavelength of light outside a visible range of an electromagnetic spectrum when stimulated with electromagnetic radiation (col. 6, lines 23-28 and col. 11, lines 2-15, teaching the wavelength is outside a visible range of an electromagnetic spectrum);

- creating an optical image of the layer of the fluorescent indicia with a scanner 60 (corresponding to the claimed imaging device) such that the layer of the fluorescent indicia can be perceived by a human eye viewing the optical image (col. 6, lines 43-60);

- recording the optical image of the article including the layer of the fluorescent indicia (col. 7, lines 12-14, teaching a CCD video camera for recording the optical image of the detected fluorescent signal in the form of the digital representation);

- comparing the optical image of the layer of the fluorescent indicia to predetermined image (corresponding to the claimed expected authentication indicia) to verify the authentity of the article (col. 7, lines 35-58).

Liang does not disclose expressly attaching identification information pertaining to the object to the recorded optical image.

Wu discloses embedding the authentication data (corresponding to the claimed identification information pertaining to the object) to image (page 439, left column, second paragraph).

Liang & Wu are combinable because they are from image authentication system/method.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to attach the authentication data (corresponding to the claimed identification information pertaining to the object) to image in Liang as taught by Wu.

The suggestion/motivation for doing so would have been a quick check for alteration and location of possible alteration (Wu, page 439, left column, second paragraph).

Therefore, it would have been obvious to combine Liang with Wu to obtain the invention as specified in claim 1.

Regarding claim 2, Liang teaches an overlay layer printed over and obscuring the layer of non-visible indicia and the overlay layer does not emit light having a wavelength outside the visible range of the electromagnetic spectrum (col. 12, lines 33-50, teaching the overlay method for printing an overlay layer over and obscuring the layer of non-visible indicia and the overlay layer does not emit light having a wavelength outside the visible range of the electromagnetic spectrum).

Regarding claims 3 and 5, Liang teaches the overlay layer is an encoded image and the layer of non-visible indicia is an encoded image (col. 19, lines 15-19, teaching the visible sub-image or the fluorescent sub-image is an encoded image).

Regarding claim 7, Liang teaches transmitting the authentication result, which implicitly includes the recorded optical image and the attached identification information, to a port 130, which is outside the authentication system (i.e., remote from the imaging device that recorded the optical image) (col. 10, lines 8-16).

Regarding claim 8, although neither Liang nor Wu specifically teaches the image is recorded at a distance from the object is greater than about 4 feet, such limitation is merely a matter of design choice and would have been obvious in the system of Liang and Wu. Liang teaches the image is recorded by a CCD video camera. The limitation in claim 8 does not define a patentable distinct invention over that in Liang and Wu since both the invention as a whole and Liang & Wu are directed to recording the image using the imaging device. The distance at which the image is recorded is inconsequential for the invention as a whole and presents no new or unexpected results, so long as the image is successfully recorded. Therefore, to record the image at a distance from the object is greater than about 4 feet in Liang and Wu would have been a matter of design choice to one of ordinary skill in the art.

Regarding claim 9, Liang teaches the layer of non-visible indicia is printed with a material that emits infrared light when stimulated with electromagnetic radiation and the wherein the device for recording the optical image is capable of receiving infrared light (col. 6, lines 17-30, teaching the layer of non-visible indicia is printed with a material that emits infrared light when stimulated with electromagnetic radiation and wherein the device for recording the optical image is capable of receiving infrared light).

Regarding claim 10, Liang teaches the stimulating electromagnetic radiation is visible light (col. 6, lines 28-30).

Regarding claim 11, Liang teaches the layer of non-visible indicia is printed with a material that emits ultraviolet light when stimulated with electromagnetic radiation and the wherein the device for recording the optical image is capable of receiving ultraviolet

light (col. 6, lines 7-17, teaching the layer of non-visible indicia is printed with a material that emits UV light when stimulated with electromagnetic radiation and wherein the device for recording the optical image is capable of receiving UV light).

Regarding claim 12, Liang teaches the stimulating electromagnetic radiation is visible light (col. 6, lines 28-30).

Regarding claims 13-15, although neither Liang nor Wu specifically teaches carbon black, an organic black ink, and phosphorous, such limitations are merely a matter of design choice and would have been obvious in the system of Liang and Wu. Liang teaches the overlay layer and the layer of non-visible indicia can be printed using some ink materials that are either visible or non-visible as discussed above. The limitations in claims 13-15 do not define a patentable distinct invention over that in Liang and Wu since both the invention as a whole and Liang & Wu are directed to printing the indicia on the layer of non-visible indicia and the overlay layer of the visible indicia with some specific materials. The types of the materials by which the indicia is printed is inconsequential for the invention as a whole and presents no new or unexpected results, so long as the indicia is successfully printed. Therefore, to use carbon black, an organic black ink, and phosphorous in Liang and Wu would have been a matter of design choice to one of ordinary skill in the art.

Regarding claim 16, Liang teaches the CCD video camera (corresponding to the claimed imaging device) for recording the optical image of the article implicitly includes a lens having variable focal length (col. 7, lines 12-14).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 17-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Liang (U.S. Patent No. 6,373,965).

Regarding claim 17, Liang discloses a system for authenticating objects having a print region with article 25 (corresponding to the claimed object) with printed material (fluorescent) contained thereon, the printed material including a layer of fluorescent indicia (corresponding to the claimed non-visible indicia) that emits light outside a visible range of an electromagnetic spectrum when stimulated with electromagnetic radiation (col. 6, lines 23-28 and col. 11, lines 2-15, teaching the wavelength is outside a visible range of an electromagnetic spectrum), the system comprising:

- at least a CCD video camera (corresponding to the claimed imaging device) capable of creating and recording an optical images of the articles, including the layer of the fluorescent indicia such that the layer of the fluorescent indicia can be perceived by a human eye viewing the optical image (col. 7, lines 12-14, teaching a CCD video camera for creating and recording the optical image of the detected fluorescent signal in

the form of the digital representation; and col. 8, lines 53-55, teaching that the image can be made visible only under UV illumination);

- a central authentication system in communication with at least one device to receive optical images recorded by the imaging device (col. 10, lines 8-16, teaching output port 130 in communication with the system to receive optical images recorded by the CCD video camera).

Regarding claim 18, Liang teaches the communication via microcomputer 100 (col. 10, lines 50-64).

Regarding claim 19, Liang teaches a program memory serving as a database (col. 10, lines 59-63).

Regarding claim 20, Liang teaches identifying the location of the objects of the images (col. 16, lines 31-33).

Regarding claim 21, Liang teaches the CCD video camera (corresponding to the claimed imaging device) implicitly includes a lens having variable focal length (col. 7, lines 12-14).

Allowable Subject Matter

6. Claims 4 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 4 and 6, the prior art, either taken singly or in combination,

does not teach:

- the encoded image is printed with a frequency of a predetermined number of lines per inch wherein an authentication image is revealed when the encoded image of the printed image is viewed through a lenticular lens having a frequency that matches that of the encoded image.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANH H DO whose telephone number is 703-308-6720. The examiner can normally be reached on 5/4-9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID K MOORE can be reached on 703-308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 17, 2004.

ANH HONG DO
PRIMARY EXAMINER